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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,649	06/26/2003	Katsumi Arata	0033-0886P	4030
2292 7590 09/14/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER CARTER, AARON W	
			ART UNIT 2624	PAPER NUMBER
			NOTIFICATION DATE 09/14/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/603,649

Applicant(s)

ARATA, KATSUMI

Examiner

Aaron W. Carter

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14, 16, 18, 20, 21 and 23-34 is/are rejected.
- 7) ☒ Claim(s) 15, 17, 19 and 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is responsive to papers filed on June 28, 2007.

Response to Amendment

2. In response to applicant's amendment received on June 28, 2007, all requested changes to the claims have been entered.

Response to Arguments

3. Applicant's arguments, see Remarks, pages 18-20, filed June 28, 2007, with respect to the rejection(s) of claim(s) 1, 4, 7, 10, 13, 16, 18, 20 and 23-34 under 35 USC 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of USPN 6,760,737 to Jiang (already of record).

4. The indicated allowability of claims 3, 6 and 9 is withdrawn in view of the newly discovered reference(s) to USPN 6,760,737 to Jiang (already of record). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 25, 26, 31, and 32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. A single claim, which claims both an apparatus and method steps for using the apparatus, is indefinite under 35 USC 112 (2nd). (MPEP 2173.05 (p) (II)).

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-14, 16, 18, 20, 21 and 23-34 are rejected under 35 U.S.C. 102(e) as being anticipated by USPN 6,760,737 to Jiang (already of record).

As to claim 1, Jiang discloses a filtering apparatus calculating a median of N pixel values arranged in a two-dimensional area of K*K (K is an odd number not smaller than 3) of a digitized image, comprising:

Receiving means for receiving said N pixel values (*Fig. 1 and column 3, lines 53-59*);

Removing means for removing, from said received N pixel values, first to ((N-1)/2)th pixel values as sorted in accordance with a prescribed order (*Fig. 1 and column 3, line 59 –*

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column 4, lines 10, using the broadest reasonable interpretation of the claim it can be said that the values are sorted and the first 4 values are removed ($(9-1)/2 = 4$); and

Sorting means for outputting, among $(N-(N-1)/2)$ pixel values remaining after removal of the pixel values by said removing means, first pixel value as sorted in accordance with said prescribed order as said median (*Fig. 1 and column 4, lines 10-42, wherein the remaining 5 values $(9-(9-1)/2 = 5)$ are sorted and the according to the sort a first value "j₂" is output as the median*).

As to claim 2, Jiang discloses the filtering apparatus according to claim 1, wherein said prescribed order is either ascending order or descending order (*column 3, lines 60-61*).

As to claim 3, Jiang discloses the filtering apparatus according to claim 1, wherein said receiving means includes

dividing means for dividing said received N pixel values into K groups each consisting of K pixel values (*Fig. 1 and column 3, lines 53-57*), and

group sorting means, for each of said K groups obtained by the division by said dividing means, for receiving and sorting the pixel values of the group in accordance with said prescribed order (*Fig. 1 and column 3, lines 57-61*) and outputting to said removing means, said removing means including a plurality of cascade-connected pixel removing units for removing $(N-1)/2$ pixel values from said N pixel values (*Fig. 1, column 2, line 62 – column 3, line 16 and column 3, line 59 – column 4, lines 10*);

each of said pixel removing units includes a determining unit determining, among first pixel values in accordance with said prescribed order of respective ones of said K groups applied, at least one first and following pixel values in accordance with the prescribed order (*Fig. 1, column 2, line 62 – column 3, line 16 and column 3, line 59 – column 4, lines 10*), and

a shift storing unit receiving, temporarily storing and outputting said pixel values of said K groups (*Fig. 1, column 2, line 62 – column 3, line 16 and column 3, line 59 – column 4, lines 10*); and

said shift storing unit removes, in said group including said pixel value determined by said determining unit, said determined pixel value from said pixel values of the stored group, and shifts order of the second and the following pixel values remaining after the removal in accordance with said prescribed order before outputting (*Fig. 1, column 2, line 62 – column 3, line 16 and column 3, line 59 – column 4, lines 10*).

As to claim 4, Jiang discloses a filtering apparatus calculating a median of N pixel values arranged in a two-dimensional area of K*K (K is an odd number not smaller than 3) of a digitized image, comprising:

Receiving means for receiving said N pixel values (*column 3, lines 53-59*);

Removing means for removing, from said received N pixel values, $((N-1)/2+2)$ to Nth pixel values as sorted in accordance with a prescribed order (*Fig. 1 and column 3, line 59 – column 4, lines 10, using the broadest reasonable interpretation of the claim it can be said that the values are sorted and the last 4 values are removed, see also column 5, lines 11-14*); and

Sorting means for outputting, among $(N-(N-1)/2)$ pixel values remaining after removal of the pixel values by said removing means, $(N-(N-1)/2)$ th pixel value as sorted in accordance with said prescribed order as said median (*column 4, lines 10-42, wherein the remaining 5 values $(9-(9-1)/2 = 5)$ are sorted and the according to the sort a pixel value " j_2 " is output as the median*).

As to claim 5, please refer to the rejection of claim 2 above.

As to claim 6, please refer to the rejection of claim 3 above.

As to claim 7, please refer to the rejection of claim 1 above.

As to claim 8, please refer to the rejection of claim 2 above.

As to claim 9, please refer to the rejection of claim 3 above.

As to claim 10, please refer to the rejection of claim 4 above.

As to claim 11, please refer to the rejection of claim 2 above.

As to claim 12, please refer to the rejection of claim 3 above.

As to claim 13, please refer to the rejection of claim 1 above.

As to claim 14, please refer to the rejection of claim 2 above.

As to claim 16, please refer to the rejection of claim 4 above.

As to claim 18, please refer to the rejection of claim 1 above.

As to claim 20, please refer to the rejection of claim 4 above.

As to claim 21, please refer to the rejection of claim 2 above.

As to claim 23, please refer to the rejection of claim 1 above.

As to claim 24, please refer to the rejection of claim 4 above.

As to claim 25, please refer to the rejection of claim 1 above.

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As to claim 26, please refer to the rejection of claim 4 above.

As to claim 27, please refer to the rejection of claim 1 above.

As to claim 28, please refer to the rejection of claim 4 above.

As to claim 29, please refer to the rejection of claim 1 above.

As to claim 30, please refer to the rejection of claim 4 above.

As to claim 31, please refer to the rejection of claim 1 above.

As to claim 32, please refer to the rejection of claim 4 above.

As to claim 33, please refer to the rejection of claim 1 above.

As to claim 34, please refer to the rejection of claim 4 above.

Allowable Subject Matter

8. Claims 15, 17, 19 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion


9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron W. Carter whose telephone number is (571) 272-7445.

The examiner can normally be reached on 8am - 4:30 am (Mon. - Fri.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Aaron Carter
AU 2624